

# A list of Aphids (Homoptera : Aphididae) from India and adjacent countries<sup>1</sup>

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This paper presents a systematic list of the species (344) and genera (142) of aphids so far known from India and adjacent countries, namely Ceylon, Pakistan, Nepal & Sikkim and provides notes on their host plants, first reference, distribution in the region and sexual forms. The genera and species of aphids originally described from this region are also indicated. Relevant references are provided.

## INTRODUCTION

Aphids are small Homoptera colonising almost all types of plants. They usually infest the stems and underside of leaves, though some species have been reported from the roots and hard woody parts. They are known to be the largest group of insect vectors for plant viruses and they also cause considerable damage by sucking the sap of the host plant ; some species are well known for their role in forming plant galls. A number of species are cosmopolitan in distribution, while others have restricted distribution. Many of the tropical species reproduce by parthenogenesis, although completion of life-cycle in temperate region are known. Some species are attended by ants.

Parasites and predators of aphids have attracted considerable attention in recent times, a short résumé of which has been published by Eastop (1966).

India, with its diversity in altitude, rainfall and vegetation, resulting in tropical, sub-tropical and temperate conditions, is rich in aphids. Taxonomy of aphids was started in the last decade of the nineteenth century. Lefroy & Howlett (1909) presented for the first time a consolidated list of species known till then from India. Later Behura (1963)

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gave a similar account, in which he reported 131 species from India. These authors were apparently not aware of the exact taxonomic status of quite a number of species. Moreover, review of literature and examination of available material reveals that quite a number of species have not been incorporated even in the rather recent list of Behura (op. cit).

Since a number of researchers are now engaged in the study of the aphid fauna of India and its adjacent countries, an up-to-date list (up to 1968) of aphids from Ceylon, India, Nepal, Pakistan and Sikkim will facilitate future studies. Countries adjacent to India have been taken into account because the aphid fauna of these countries do not differ much from the Indian ones, as revealed from the works of Das (1918), Alam & Hafiz (1963), Judenko & Eastop (1963), Eastop (1966) and Hille Ris Lambers (1966).

The species numbered 21, 28, 37, 38, 56, 59, 67, 72, 92, 100, 103, 104, 110, 111, 135, 137, 138, 140, 142, 154, 155, 167, 168, 188, 210, 245, 246, 265, 280, 281, 290, 309, 310 in the text are known only from Pakistan; Nos. 25, 27, 82, 116, 119, 121, 132, 145, 147, 200, 216, 252, 277, 283, 284, 325, 331, 342 are known only from Nepal; Nos. 57, 79, 86, 95, 126, 198, 199, 219, 225, 242, 251, 261, 319 are known only from Sikkim; and Nos. 47, 88, 162, 182, 209, 229, 236, 237, 238, 240 are known only from Ceylon. These species as also the ones which are distributed in one or more adjacent countries in addition to India are denoted by abbreviations namely C—Ceylon, N—Nepal, P—Pakistan, and S—Sikkim; if there is no such abbreviation the species is then known only from India. References in the parentheses relate to the first record. The genera and species described as new from this geographical area have been marked by (\*\*\*) and (\*) respectively.

The British Museum Collection, London, and the Zoological Survey of India Collection, Calcutta, are abbreviated as B.M. Coll. and Z.S.I. Coll. in the text.

- 1 **Acyrtosiphon (Metopolophium) dirhodum** (Walk.). *Rosa* sp., (R. Kumar, B.M. Coll.).
- 2 **A. malvae** (Mosley). *Calceolaria* sp., (Basu 1961b).
- 3 **A. pisum** (Harris). *Alhagi maurosum*, *Clianthus dampieri*, *Dolichos lablab*, *Lathyrus odoratum*, *Medicago denticulata*, *Medicago falcatum*, *Medicago lupulina*, *Medicago sativa*, *Melilotus alba*, *Peganum harmala*, *Pisum sativum*, *Sesbania grandiflora*, *Trigonella foenum-graecum*, (Deshpande 1937). P
- 4\* **A. rubi** Narz., **elliptica** Stroyan & Nagaich. *Rubus elliptica*, (Stroyan & Nagaich 1964).
- 5\* **A. sesbaniae** David. *Sesbania grandiflora*, (David 1956a).

- 6 **Adelges himalayensis** Stebbing. *Abies webbiana*, *Picea morinda*, [Cotes 1896 (1893) as *Chermes abietis* L. & Kalt.; Stebbing 1904 described this species as *Chermes abietis piceae* Stebbing].
- 7\* **A. (Dreyfusia) joshi** Schneider-Orelli & Schneider. *Abies pindrow*, (Schneider-Orelli & Schneider 1954). P
- 8\* **A. (Dreyfusia) knuchelli** Schneider-Orelli & Schneider. *Abies pindrow*, (Schneider-Orelli & Schneider 1959), [Ghani & Rao (1966) opined that 'both these species are likely the aphids mentioned by Stebbing (1904, 1910) as *Chermes abites piceae* Stebbing and later as *Chermes himalayensis* Stebbing]. P
- 9\* **Aiceona litseae** Basu H.R.L. *Litsea polyantha*, (Basu & H.R.L. 1968).
- 10\* **Akkaia bengalensis** Basu, *Polygonum* sp., (Basu 1967).
- 11 **Aleurodaphis blumeae** van der Goot. *Cynoglossum wallichii*, [Ghosh and Raychaudhuri 1963 (1962)].
- 12\* **Amphicercidus indicus** H.R.L. and Basu, *Lonicera glabrata*, (H.R.L. & Basu 1966).
- 13 **Amphorophora ampullata** Buckton. Unidentified fern (Verma 1965).
- 14\* **A. ampullata bengalensis** H.R.L. & Basu. Various ferns (H.R.L. & Basu 1966). N
- 15 **Anoecia ? cornii** (Fabricius). *Cornus* to grass roots (R. Kumar, B.M. Coll.).
- 16 **Aphidura** sp. David. Host plant not mentioned. (David 1967).
- 17 **Aphis achyranthii** Theobald. *Achyranthes* sp., *Punica granatum*, (Theobald 1929).
- 18 **Aphis** sp. nr. **clematidis** Koch. *Clematis*, (R. Kumar, B.M. Coll.) [Later described as *Aphis clematidis simlaensis* Kumar & Burk.]
- 19 **A. craccivora** Koch. A large number of Leguminosae, Cucurbitaceae, Labiatae, Menispermaceae, Nyctagenaceae, Rosaceae, Scitaminaceae and Urticaceae, (Lefroy & Howlett 1909; earlier records of *Aphis medicaginis* Koch refer to this species; Basu *et al.* 1968, described the sexual forms of this species). C, P
- 20 **A. euonymi** Fabricius. *Benincasa cerifera*, *Centauria* sp., *Cestrum nocturnum*, *Chenopodium revely*, *Cnicus arvensis*, *Pyrus communis*, *Rumex dentatus*, *Solanum nigrum*, *Vigna catjang*,

- (Lefroy & Howlett 1909 ; David 1954, opined that *fabae* Scop, *rumicis* Linne, of Indian authors, refer to this species).
- 21 **A. fabae** Scop. *Daucus carota*, *Malva sylvestris*, *Rumex dentata*, *Solanum nigrum*, (B.M. Coll.). P
  - 22 **A. fabae solanella** Theo. *Solanum nigrum*, (Alam & Hafiz 1963). C
  - 23 **A. farinosa yanagicola**, *Salix* sp., (K. D. Verma, B.M. Coll.).
  - 24 **A. gossypii** Glover. Wide host range [Lefroy & Howlett 1909 ; Ghosh & Raychaudhuri 1964 (1962) recorded male from India]. P, S
  - 25 **A. glycines** Mats. *Glycine max*, (K. C. Sharma, B. M. Coll. from Nepal). N
  - 26 **A. ? hardyi** Eastop. *Psidium guajava*, (B. M. Coll.).
  - 27 **A. kurosawai** Takahashi. *Artemisia* sp., (K. C. Sharma, B. M. Coll.). N
  - 28\* **A. longituba** H.R.L. Host plant unknown, (H.R.L. 1966 from Pakistan). P
  - 29 **A. malvae** Koch. Compositae, Cucurbitaceae, (Lefroy & Howlett 1909, Bodenheimer & Swirski 1957 list it as synonym of *A. nasturtii* in part and *A. umbrella* Borner).
  - 30 **A. nasturtii** (Kalt.). *Nasturtium indicum*, *Rorippa indica*, (Lefroy & Howlett 1909). P
  - 31 **A. nerii** (B.D.F.). *Asclepias* sp., *Calotropis gigantea*, *Calotropis procera*, *Cryptostegia grandiflora*, *Cynanchum dalhousiae*, *Drega volubilis*, *Hoya longifolia*, *Hoya viridis*, *Jatropha* sp., *Marsdenia volubilis*, *Nerium odorum*, *Pergularia extensa*, (Lefroy & Howlett 1909 ; *A. asclepiadis* Pass. of many Indian authors). C, P, S
  - 32 **A. pomi** De Geer. *Pyrus* sp., (Krishnamurti 1950).
  - 33 **A. punicae** Passerini. *Punica granatum*, (David 1956 c ; Das's 1918, *Aphis durantii* is a synonym). P
  - 34 **A. rubifolii** Thomas. *Rubus ellipticus*, (B.M. Coll.).
  - 35 **A. ruborum** Borner, *Rubus fruticosus*. (B. M. Coll.).
  - 36 **A. spiraeicola** Patch. *Bidens pilosa*, *Emilia sonchifolia*, *Spirea* sp., *Mikania scandens*, *Eupatorium* sp., (Theobald 1929 ; also known as *malvoides* v.d. Goot). C, P, S



- 37 *A. ? umbrella* Börner. *Malvastrum* sp., (B. M. Coll.), P
- 38 *A. ? urticata* Fabricius. *Urtica dioica*, (B. M. Coll.), P
- 39 *A. verbasci* Schrank. *Buddleia paniculata*, *Polygonum atatum*, (Chowdhuri *et al.* 1968).
- 40 *Aphrastasia funiticta* Prey. *Tsuga brunoniana*, (B. M. Coll.).
- 41 *Aploneura* sp., (K. C. Sharma, B. M. Coll. from Nepal). N
- 42\* *Asiphonella cynodonti* (Das). *Cynodon dactylon*, (George 1927 as *Geoica cynodontii*; Das 1918 as *Pemphigus cynodonti* from Pakistan). P
- 43\*\* *Aspidophorodon harvensis* Verma. *Salix* sp., (Verma 1966b).
- 44\* *Astegopteryx bambusae* (Buckton). *Bambusa arundinacea*, *Dendrocalamus giganteus*, [Buckton 1896b (1893), as *Oregma bambusae*].
- 45\* *A. formosana* (Takahashi). *Bambusa arundinacea*, (David 1959).
- 46 *A. formosana neelgiriensis* David. *Bambusa* sp., (David 1958a).
- 47 *A. insularis* (v.d. Goot). *Dendrocalamus strictus*, (v.d. Goot 1918, from Ceylon). C
- 48 *A. lutecens* (v.d. Goot). *Bambusa* sp., (Basu 1961a, v.d. Goot 1918). C
- 49 *A. minuta* (v.d. Goot). *Bambusa* sp., (David 1959).
- 50\* *A. mysorensis* (Theobald). *Bambusa arundinacea*, (Theobald 1929, David 1956c)
- 51 *Aulacorthum solani* (Kalt.). *Citrus* sp., *Digitalis purpurea*, *Solanum tuberosum*, (David 1958c)
- 52 *A. ? simpliciois* v.d. Goot. *Acronychia pedunculata* (= *laurifolia*), (Ghosh & Raychaudhuri 1962)
- 53 *A. (Neomyzus) circumflexus* (Buckton). *Antirrhinum* sp., *Begonia* sp., *Calceolaria* sp., and many other glasshouse plants, (Basu & Banerjee 1958). C, S
- 54\* *A. (Neomyzus) dicentrae* Basu. *Dicentra thalictrifolia*, (Basu 1967).
- 55 *A. (Neomyzus) dispersum* (v.d. Goot). *Emilia javanica*, *Emilia sonchifolia*, (David 1956d).

- 56 **Baizongia pistaciae** (Linn.). *Pistacia integerrima*, (Buckton 1896a, as *Pemphigus aedifactor*). P
- 57 **Betacallis odaiensis** Takahashi. Acanthaceae and Araliaceae, (Ghosh & Raychaudhuri (1968a), from Sikkim). S
- 58 **Brachycaudus helichrysi** (Kalt.). *Ageratum conyzoides*, *Blumea lacera*, *Bomarea caldasiana*, *Chrysanthemum* sp., *Cineraria* sp., *Cynoglossum furcatum*, *Erigeron canadensis*, *Prunus amygdalis*, *Prunus armeniaca*, *Prunus domesticus*, *Prunus padus*, *Prunus persica*, *Prunus sinensis*, (Das 1918, also known earlier as *B. pruni* Koch).
- 59 **B. (Acaudus) cardui** (L.). *Cnicus wallichi*, (Alam & Hafiz 1963). P
- 60 **B. (Appelia) tragopogonis** (Kalt.). Host plant unknown. (B. M. Coll.).
- 61 **B. (Thuleaphis) rumexicolens** Patch. *Rumex* sp., (R. Kumar, B. M. Coll.).
- 62\*\***Brachymyzus jasmini** Basu. *Jasminum humile*, (Basu 1964).
- 63 **Brachysiphoniella montana** (v. d. Goot). *Cynodon plectostachyum*, (Das 1918, in the collection of Z.S.I. No. 8284/5/6 as *Aphis* sp.).
- 64\* **Brachyunguis calotropicus** Menon & Pawar. *Calotropis procera*, (Menon & Pawar 1957 ; probably *Brachyunguis* sp. of Raychaudhuri & Ghosh 1959).
- 65\*\***B. carthami** Das. *Carthamus oxycarpi*, *Carthamus oxycantha*, *Vernonia cinerea* and other weeds, (Fletcher 1920). P
- 66\*\***B. harmalae** Das. *Peganum harmala*, (Kapur 1942). (Das 1918, reported sexual male and female from Pakistan ; Lahore). P
- 67\*\***B. letsoniae** Das. *Letsonia scandens*, (Das 1918). P
- 68 **B. ? plotnikovi** Nevskii. *Peganum harmala*, (B. M. Coll.).
- 69 **B. ? tamaricis** (Lichtenstein). *Tamarix articulata*, (B. M. Coll.) P
- 70 **Brevicoryne brassicae** (Linnaeus). Cruciferae, (Lefroy & Howlett 1909 ; David 1958, recorded sexual female from India). P
- 71 **Capitophorus archangelskii** Nevskii. Host plant unknown, *Elaeagnus* elsewhere, (B. M. Coll.).

- 72 *C. carduinus* Walker. *Cnicus wallichii*, (Alam & Hafiz 1963). P
- 73 *C. eleagni* (del Guercio). *Cynara seolymus*, (David 1956d). N
- 74 *C. formosartimisiae* (Takahashi). *Artemisia dentata*, (Basu 1961b).
- 75 *C. hippophaes* (Walker). *Polygonum hydropiper*, (Verma 1965).
- 76\* *C. hippophaes indicus* Ghosh & Raychaudhuri. *Polygonum chinense*, (Ghosh & Raychaudhuri 1968).
- 77 *C. hippophaes javanicus* H.R.L. *Polygonum* sp., *Polygonum caespitosum*, (Basu 1961b). P
- 78 *C. hippophaes mittegoni* Eastop. *Polygonum glabrum*, (B. M. Coll.).
- 79\* *C. vernoniae* Ghosh & Raychaudhuri. *Vernonia* sp., (Ghosh & Raychaudhuri, 1968 ; only from Sikkim). S
- 80 *Cavariella aegopdii* (Scopoli). *Salix* sp., (Verma 1965).
- 81\* *C. nigra* Basu. *Salix elegans*, (Basu 1964).
- 82 *C. salicicola* Mats. Trapped (K. C. Sharma, B. M. Coll. from Nepal). N
- 83 *Ceratoglyphina bambusae* v.d. Goot. *Bambusa* sp., (Basu 1961b).
- 84\* *Cerataphis variabilis* H.R.L. *Areca catechu*, *Cocos nucifera*, (David 1959, opined that *Cerataphis* species mentioned by Lefroy and Howlett (1909) as *lataniae* Bois. is probably not *lataniae* but *variabilis*). C
- 85\* *C. variabilis* H.R.L. unknown var. *Calamus rotang*, *Cocos* sp., (David 1959).
- 86 *Cerataphis* sp. *Cinchona* sp., (Cotes 1893). S
- 87\* *Ceratopemphigiella delhiensis* Menon & Pawar. Host plant unknown, (Menon & Pawar 1958).
- 88\* *Ceratopemphigus zehntneri* Schoutedon. *Brunfelsia uniflora*, (Doncaster 1956). C
- 89 *Ceratovacuna arundinariae* Takahashi. *Bambusa* sp., (B.M. Coll.).
- 90 *C. lanigera* Zehrtner. *Saccharum officinarum*, plant of N.O. Combretaceae (Basu & Banerjee 1958). S
- 91 *C. orientalis* Takahashi. Host plant unknown, (B. M. Coll.).

- 92\* *Ceruraphis eastopi* H.R.L. *Viburnum cotinifolium*, (H.R.L. 1966 from Pakistan). P
- 93\* *Cervaphis rappardi* H.R.L. ssp. *indica* Basu. *Cajanus indicus*, (Basu 1961b).
- 94 *C. schoutedeniae* v.d. Goot. *Tabernaemontana divaricata*, (Krishnamurti 1930).
- 95 *Chaetogeica foliidentata* Remaudiere & Tao. Alate from *Vicia faba*, [Ghosh & Raychaudhuri (1968a), from Sikkim].
- 96 *Chaetogeica* sp. Host unknown, (B. M. Coll.).
- 97\*\**Chaetomyzus rhododendri* Ghosh & Raychaudhuri. *Rhododendron arboreum*, [Ghosh & Raychaudhuri 1964 (1962b)].
- 98 *Chaetosiphon (Pentatrichopus) fraegifoli* (Cockerell). *Rosa* sp., (David 1958a).
- 99 *Chaitophorus albus* Mordv. *Populus alba*, (B. M. Coll.).
- 100\* *C. himalayensis* (Das). *Salix tetrasperma*, *Salix* sp., (Das 1918 from Pakistan). P
- 101\* *C. kapuri* H.R.L. *Populus* sp., (H.R.L. 1966). P
- 102\* *C. niger* Mordv. *Salix* sp., (Verma 1966).
- 103\* *C. nigritus* H.R.L. *Salix* sp., (H.R.L. 1966, from Pakistan). P
- 104\* *C. pakistanicus* H.R.L. *Salix tetrasperma*, *Salix* spp., (H.R.L. 1966, from Pakistan). P
- 105 *C. versicolor* Koch. *Populus* sp., (B.M. Coll.).
- 106\* *Chaitoregma tattakana* H.R.L. and Basu. *Arundinaria* sp., (H.R.L. & Basu 1966).
- 107 *Chromaphis jugaldicola* Kalt. *Juglans regia*, (Verma 1965).
- 108\* *Cinara eastopi* Pintera. On snow (Pintera 1965).
- 109\* *C. indica* Verma. *Cedrus deodara*, (Verma 1966).
- 110\* *C. lachnirostris* H.R.L. *Pinus* sp. (H.R.L. 1966, from Pakistan). P
- 111 *C. maculipes* H.R.L. *Pinus wallichiana (excelsa)*, (H.R.L. 1966, from Pakistan). P

- 112 **C. orientalis** (Takahashi). *Pinus* sp., (S. N. Chatterjee, 1922, det. V.F.E., B. M. Coll.).
- 113 **C. radicolica** Well. On snow, (A. P. Kapur, Z.S.I. Coll. 1955).
- 114 **Cinara** sp. near **schimitscheki** Börner. *Pinus insularis*, (Ghosh & Raychaudhuri 1962 as *pineus*).
- 115 **Cinara** (**Cinaropsis**) sp. nr. **piceicola** Chol. Host plant unknown, (B. M. Coll.).
- 116 **Cinara** (**Cupressobium**) **tujafilina** Del Guer. From Conifers, (B. M. Coll.). N
- 117 **Cinara** (**Dinolachnus**)? **abieticola** (Chol.). Underbark of *Cedrus libani* (= *deodara*), (S. N. Chatterjee 1920, B. M. Coll.).
- 118 **Cinara** (**Lachniella**) **comata** Doncaster. On snow, (Doncaster 1956).
- 119 **Coloradoa**? **artimisiae** Del Guercio. *Artemisia* sp., (K. C. Sharma, B. M. Coll.). N
- 120 **Coloradoa rufomaculata** Wilson. *Chrysanthemum* sp., (Fletcher 1920, Das 1918, as *Stephensioia lahorensis*). P
- 121 **C.** (**Lidaja**)?? **heinzei** Börner. *Artemisia* sp., (K. C. Sharma, B. M. Coll.). N
- 122 **Dactynotus kashmiricus** Verma. *Campanula colorata*, (Verma 1965).
- 123\* **D. pseudotanacetii** Verma. *Helianthus tuberosus*, (Verma 1966).
- 124 **D. sonchi** (Geoffroy). *Carthamus tinctorius*, *Lactusa uncinata*, *Sonchus arvensis*, *Sonchus oleraceus*, (Lefroy & Howlett 1909 as *Macrosiphum*).
- 125 **Dactynotus** sp. Host unidentified, [Ghosh & Raychaudhuri 1964 (1962b)].
- 126 **Dactynotus** sp. Host unidentified, (Ghosh & Raychaudhuri in press a). S
- 127 **Dactynotus** (**Uromelan**) **carthami** H.R.L. *Carthamus tinctorius*, (David 1956d).
- 128 **D.** (**Uromelan**) **compositae** (Theobald). *Calendula* sp., *Cosmos* sp., *Zinnia* sp., etc. (Basu & Banerjee 1958).
- 129\* **D.** (**Uromelan**) **dravidiana** David, *Vernonia cineria*, (David 1956a).



- 130 **D. (Uromelan) ? nigrocampanulae** (Theo.) **rapunculoides** Börner. *Centaura moschata*, *Sonchus* spp., (Z.S.I. Coll. 9598/19 leg Anandale, dt. v.d. Goot, 1915 as *M. solidaginis* Fab.).
- 131 **D. (Uromelan) similis** H.R.L. *Urtica dioica*, (Verma & Mathur, 1966).
- 132 **Diuraphis ? noxuis** Mordwilko. *Hordeum vulgare*, (B. M. Coll.). N
- 133 **Dysaphis emicis** Memeur. *Rumex* sp., (R. Kumar, B. M. Coll.).
- 134 **Dysaphis foeniculus** Theobald. *Rumex* sp., (B.M. Coll.).
- 135 **D. gahani** Stroyan. *Cnicus wallichii*, (B. M. Coll.). P
- 136 **D. ? plantaginea** (Passerini). *Malus* sp., (B. M. Coll.)
- 137 **D. pyri** B.D.F. *Pyrus communis*, (B. M. Coll.). P
- 138 **Dysaphis** sp. *Rumex dentatus*, (Alam & Hafiz 1963, from Pakistan). P
- 139 **Ephedrephis ephedrae** (Nevsky), *Ephedrus* sp., (Verma 1966).
- 140 **Epipemphigus imaicus** Chold. *Populus ciliata*, (H.R.L. 1966). P
- 141 **Eriosoma lanigerum** (Hausmann). *Pyrus malus*, (Cotes 1891). P
- 142 **E. phaenax** Mord. Alatae only in *Androchne cordifolia*, (B. M. Coll., from Pakistan). P
- 143 **Eriosoma** sp. Host plant unknown, (B. M. Coll.).
- 144 **Eucarizza elaeagnus** Ferr. Host Plant unknown, (B.M. Coll.).
- 145 **Euceraphis ? chuansiensis** Tao. Trapped, (K. C. Sharma, B. M. Coll.). N
- 146 **Eulachnus thunbergi** Wilson. *Pinus insularis*, (Ghosh & Raychaudhuri in 1968b).
- 147 **Euthoracaphis** sp. Host plant unknown, (B. M. Coll.). N
- 148\* **Eutrichosiphum davidi** Raychaudhuri. *Quercus serrata*, (Raychaudhuri 1956).
- 149 **Eutrichosiphum pasaniae** (Okajima). *Quercus coccinea*, *Quercus prinus (montana)*, *Quercus serrata*, (David 1956d, as *lithocarpi*).
- 150 **E. vandergooti** Raychaudhuri. *Quercus serrata*, (Basu 1961b).

- 151 **Forda orientalis** George. *Pennisetum typhoideum*, *Sorghum vulgare*, (George 1927).
- 152 **Formosanaphis micheliae** Takahashi. *Magnolia campbellii*, *Magnolia stellata*, (Basu 1961b).
- 153 **Geoica lucifaga** (Zehntner). *Sorghum vulgare*, *Triticum vulgare*, (George 1924 as *Geoica* sp.).
- 154\*\* **Gharesia polunini** Stroyan. *Carex* sp., (Stroyan 1963, from Pakistan). P
- 155\*\* **Globulicaudaphis pakistanicus** H.R.L. *Quercus dilatata*, (H.R.L. 1966, from Pakistan). P
- 156 **Glyphinaphis bambusae** (v.d. Goot). *Bambusa* sp., (Basu 1961b).
- 157\* **Greenidea artocarpi** Westwood. *Artocarpus incisa*, *Artocarpus integra*, (George 1927) C
- 158 **Greenidea** sp. *Dalbergia sissoo*, *Echnocarpus dorsycarpus*, (Anonymous 1956).
- 159 **Greenidea (Trichosiphum) anonae** (Pergande)? *Nicotiana tabacum*, (Raychaudhuri 1956).
- 160 **G. (Trichosiphum) ficicola** Takahashi. *Ficus* spp., (Raychaudhuri 1956).
- 161 **G. (Trichosiphum) formosana** (Maki). *Eugenia* sp., *Psidium guajava*, (Raychaudhuri 1956).
- 162 **Greenideoida ceyloniae** v.d. Goot. Trapped, (Judenko & Eastop 1963). C
- 163\* **G. lambersi** Basu. *Hymenodictyon* sp., (Basu 1964).
- 164\*\* **Hillerislambersia darjeelingi** Basu. *Lonicera* sp., (Basu 1967).
- 165\* **Holotrichosiphon dubius**, v.d. Goot. Host plant unknown, (van der Goot 1917).
- 166\* **Hyadaphis coriandri** (Das). *Carum carraway*, *Carum copticum*, *Coriandrum sativum*, *Cuminum sativum*, *Daucus carota*, *Foeniculum vulgare*, *Peucedanum graveolens*, (Theobald 1929 as *Hyalopterus carii* Theo. ; Das 1918 reported alate male of this species as *Brevicoryne*, from Pakistan). P
- 167 **Hyadaphis foeniculi** Pass. Host plant unknown (B. M. Coll.). P

- 168 **Hyalopterus amygdali** Blanchard. *Prunus amygdalus*, *Prunus armeniaca*, *Prunus bokhariensis*, *Prunus persica*, (B. M. Coll.). P
- 169 **H. atriplicis** (Linnaeus). *Chenopodium album*, *Chenopodium* spp., (Das 1918, reported it as *Brevicoryne chenopodii* (Schrank), from India (Delhi) and Pakistan (Lahore). N,P
- 170 **H. pruni** (Geogroy). *Arundo donax*, *Chenopodium album*, *Coriandrum sativum*, *Datura* sp., *Phaseolus vulgaris*, *Phragmites karka*, *Prunus americana*, *Prunus persica*, *Prunus* sp., (Fletcher 1920 ; Das 1918, reported male and female from Pakistan). P
- 171 **Hyperomyzus carduellinus** (Theobald). *Sonchus arvensis*, (B.M. Coll.).
- 172 **Hyperomyzus lactucae** Linn. *Sonchus oleraceus*, *Sonchus* spp. and also from *Ribes* spp., (B. M. Coll. ; Das 1918, recorded this species as *Rhopalosiphum* from Pakistan). P
- 173 **Hyperomyzus oleracea** (v.d. Goot). *Sonchus arvensis*, (David 1958b).
- 174 **Hysteroneura setariae** (Thomas). *Oryza sativa* and a number of Gramineous plants, (David *et al.* 1967).
- 175 **Idiopterus** sp. From Fern, (A. N. Basu, W. B. Govt. Coll., Dept. Agric. Res. Inst.)
- 176 **Impatientinum impatiens** (Shinji). *Impatiens* sp., (Ghosh & Raychaudhuri 1968).
- 177\*\***Indiochaitophorus furcatus** Verma. *Ulmus wallachina*, (Verma 1966).
- 178 **Indomegoura indicum** (v.d. Goot). Unidentified host plant, (v.d. Goot 1917, as *Rhopalosiphum*).
- 179 **Jacksonia conandri** (Takahashi). Gramineous host, (Ghosh & Raychaudhuri, 1968a). S
- 180 **Kalltenbachiella** sp. Trapped, (Judenko & Eastop 1963). C
- 181\* **Kurisakia indica** Basu. *Engelhardtia spicata*, (Basu 1967).
- 182\* **Lachnus greeni** v.d. Goot. *Cryptomeria* sp., (v.d. Goot 1918, from Ceylon). C
- 183\* **L. himalayensis** v.d. Goot. Host plant unknown, (v.d. Goot 1917).
- 184\* **L. krishni** (George). *Pyrus communis*, (George 1927 as *Dilachnus*).

- 185\* *L. similis* v.d. Goot. Host plant unknown, (v.d. Goot 1917).
- 186\* *L. titabarensis* Raychaudhuri & Ghosh. *Heteropnax fragnens*, (Raychaudhuri & Ghosh 1964).
- 187\* *L. tropicalis* (v.d. Goot). Host plant unknown, (v.d. Goot 1916).
- 188\* *Liosomaphis atra* H.R.L. *Berberis* sp., (H.R.L. 1966) (H.R.L. 1966 from Pakistan). P
- 189 *L. berberidis* (Kalt.). From perennials, (David 1958). C
- 190\* *L. himalzayensis* Basu. *Berberis umbellata*, (Basu 1964). N
- 191 *Lipaphis crysimi* (Kalt.). Cultivated cruciferae, also from Aralaiceae, Solanaceae, (George 1927 ; also known as *Siphocoryne indobrasicae* Das and *Rhopalosiphum pseudobrassicae* Davis ; Verma & Mathur 1966, recorded males from India). C,P
- 192 *L. (Lipaphisdiella) lepidii* Nevskii. *Lepidium repens*, (B. M. Coll.) C,P
- 193\* *Longicaudus himalayensis* H.R.L. *Quercus* sp., (H.R.L. 1965).
- 194 *Longiunguis donacis* (Passerini). *Arundo donax*, (George 1927, as *Aphis donacis*). P
- 195\* *L. indosacchari* David. *Iseilema laxum*, *Saccharum officinarum*, (David 1956a).
- 196 *Longiunguis sacchari* (Zehntner). *Saccharum officinarum* also from *Eleusine coracana*, *Panicum colonum*, *Sorghum vulgare*, and *Zea mays*, [George 1927 ; recorded as *Aphis sacchari* Zehnt. by early authors ; Menon, (personal communication, May 5, 1968) recorded sexuales from Delhi].
- 197 *Macrorrhinarum ensigallis* T. & T. *Ailanthus* sp., (Choudhuri *et al.* 1968 ; According to Tao, this species is a synonym of *Kaburagia rhusicola* Takagi var. *ensigallis* Tsai & Tang, personal communication to Dr. D. N. Raychaudhuri).
- 198 *Macrosiphoniella artimisiae* (Boyer). *Artemisia vulgaris*, (Ghosh & Raychaudhuri 1968a, from Sikkim). S
- 199 *M. kikungshana* Takahashi. *Asclepias currasivica*, (Ghosh & Raychaudhuri 1968a, from Sikkim). S
- 200 *M. ? oblonga* Mord. *Chrysanthemum* sp., (B. M. Coll.). N
- 201 *M. pseudoartimisiae* Shinji. *Artemisia* sp., (Verma & Mathur 1966).

- 202 **M. sanborni** (Gillette). *Chrysanthemum indicum*, *Chrysanthemum sinense*, *Vernonia* sp., (v.d. Goot 1917, as *Macrosiphum*). N,S
- 203\* **M. spinipes** Basu. *Artemisia vulgaris*, (Basu 1967).
- 204\* **M. yomogifoliae** (Shinji). *Artemisia vulgaris*, (Krishnamurti 1950 as *M. plutea* Buckton ; some authors regard this species as a subspecies of *M. artimisiae*).

## PART II

- 205 **Macrosiphum euphorbiae** (Thomas). *Chrysanthemum* sp., *Mangifera indica*, *Rosa* sp., (David 1958b).
- 206\* **M. gravelli** v.d. Goot. Host plant unknown, (v.d. Goot 1917).
- 207 **M. hellebori** Theobald & Walton. *Agrostemma coelirosa*, *Echeveria* sp., *Ranunculus* sp., (David 1956a).
- 208 **M. jaceae** Linnaeus. *Arctotis grandiflora*, *Calendula* sp., *Callopsis tinctora*, *Cannabis sativa*, *Carthamus tinctorius*, *Corchorus olitorius*, *Dahlia virabilis*, *Ficus religiosa*, *Guizotia abyssynica*, (Trehan & Halleppanawar 1949).
- 209\* **M. minutum** v.d. Goot. *Vernonia cineria*, (v.d. Goot 1918, from Ceylon). C
- 210\* **M. pachysiphon** H.R.L. *Rubus lasiocarpus*, (H.R.L. 1966). P
- 211 **M. (Sitobion) africanum** (H.R.L.) *Chrysopogon zeylanicus*, (David 1958b).
- 212 **M. (Sitobion) avanae** (Fabricius). *Avena sativa*, *Hordeum vulgare*, *Pennisetum typhoideum*, *Sorghum vulgare*, *Triticum vulgare*, *Zea mays*, (Fletcher 1920, Das 1918 ; recorded it as *Macrosiphum granarium* from India & Pakistan). N,P
- 213 **M. (Sitobion) fragariae** (Walker). *Chrysopogon zeylanicus*, *Entropogon* sp., (David 1958b).
- 214 **M. (Sitobion) graminis** (Takahashi). *Agapanthus umbellatus*, *Andropogon lividus*, *Bidens pilosa*, *Chloris barbata*, *Chrysopogon zeylanicus*, *Eragrostis gangetica*, *Glyceria fluitans*, (David 1958b).
- 215\* **M. (Sitobion) indicum** Basu. *Cymbidium* sp., (Basu 1964).
- 216 **M. (Sitobion) ibarae** Mats. *Rosa* sp., (B.M. Coll.) N



- 217\* **M. (Sitobion) lambersi** David. *Chloris barbata*, *Cynodon dactylon*, *Digitaria marginalis*, *Eremopogon foveolatus*, *Ischaemum aristatum*, *Paspalum conjugatum*, (David 1956a).
- 218\* **M. (Sitobion) leelamaniae** David. *Eleusine coracana*, *Sorghum vulgare*, *Pennisetum typhoideum*, (David 1958c).
- 219 **M. (Sitobion) luteum** (Buckton). *Dendrobium densiflorum*, (Ghosh & Raychaudhuri, 1968a). S
- 220 **M. (Sitobion) miscanthi** (Takahashi). *Agrostis* sp., *Amphilopsis pertusa*, *Avena sativa*, *Bothriochloa insculpa*, *Chloris barbata*, *Chrysopogon zeylanicus*, *Cineraria* sp., *Cymbopogon martini*, *Dactyloctenium aegyptium*, *Eleusine coracana*, *Eragrostis superba*, *Hordeum vulgare*, *Ischaemum rugosum*, *Oryza sativa*, *Sorghum vulgare*, *Triticum vulgare*, *Zea mays*, [Theobald 1929, described this species as *Macrosiphum eleusine* and David (1956c) considered *elusine* Theobald, as subspecies of *avanae* (Fab.), Eastop (1966) opined that *elusine* Theobald seems to be a synonym of *miscanthi* Takahashi].
- 221 **M. (Sitobion) phyllanthi** (Takahashi). *Phyllanthus maderaspatensis*, *Phyllanthus niruri*, (David 1958b; David also mentioned a subspecies of this species from *Emblica officinalis*).
- 222 **M. (Sitobion) rosae**, *Rosa* sp., (Basu & Banerjee 1958; Lefroy's (1909) record of *Siphonophora rosae*, may refer to this species or to *rosaeformis* Das; in Z.S.I. specimens of *rosae* from Kurseong and Kumaon hills, det. B. Das 1909 were seen). C,P
- 223\* **M. (Sitobion) rosaeformis** Das. *Rosa centofolia*, *Rosa damascena*, *Rosa moschata*, (George 1927; Das 1918 described this species originally from Lahore). P
- 224 **M. (Sitobion) smilaceti dalhousiensis** Verma. *Smilax parvifolia*, (Verma 1966).
- 225 **M. (Sitobion) smilacicola** Takahashi ssp. **sikkimensis** Ghosh & Raychaudhuri. *Smilax* sp., (Ghosh & Raychaudhuri 1968, from Sikkim). S
- 226 **M. (Sitobion) ? takahashii** Eastop. *Emblica* sp., (B. M. Coll.).
- 227\* **Masonaphis anaphilidis** Basu. *Anaphilis triplinervis*, (Basu 1964).
- 228\* **Matsumuraja capitophorides** H.R.L. *Rubus macilentus*, [Chowdhuri et al. 1968, H.R.L. (1966) described this species from Pakistan]. P

- 229 *Matsumuraja* sp. Host unknown, (Judenko & Eastop 1963). C
- 230 *Melanaphis bambusae* (Fullaway). *Bambusa* sp., (Basu 1961b).
- 231 *Melanaphis* ? *pahalensis* Takahasbi. Plant of N.O. Combretaceae, (Ghosh Coll. 1962). S
- 232 *Metaphordon polygoni* (v.d. Goot). *Nicotiana tabacum*, probably a migrant, [Ghosh & Raychaudhuri 1968a]. S
- 233 *Microlophium* ?? *evansi* (Theobald). *Urtica* sp., (Verma, B. M. Coll.).
- 234\*\* *Micromyzodium filicum* David. *Gymnogramma peruviana*, *Neprolepedis* sp., *Polypodium* sp., (David 1958d).
- 235 *M. dasi* Verma. From unidentified fern, (Verma 1966).
- 236 *Micromyzus dispersum* v.d.G. *Emilia* sp., (B. M. Coll.). C
- 237 *M. eastopi* Carver. Host plant unknown, (Carver 1965). C
- 238 *M. judenkoi* Carver. Host plant unknown, (Carver 1965) [Probably last two are same species recorded by Judenko & Eastop 1963 as *Micromyzus* spp.]. C
- 239\* *M. kalimpongensis* Basu. *Hedychium coronarium*, (Basu 1967).
- 240\* *M. nigrum* v.d.G., *Cinnamomum* sp., (v.d.G. 1918 from Ceylon). C
- 241 *Mindarus japonicus* Tak. *Abies pindrow*, (B. M. Coll.).
- 242 *Mollitrichosiphum tenuicorpus* (Okajima). *Castanospermum* sp., [Ghosh & Raychaudhuri 1968 (a), from Sikkim]. S
- 243\* *M. (Metatrichosiphon) nandii* Basu. *Alnus nepalensis*, (Basu 1964).
- 244 *Mordvilkomemor* sp. *Artemisia vestata*, (Choudhuri *et al.* 1968).
- 245 *Mordvilkomemor* sp. *Cnicus wallichii*, (Alam & Hafiz 1963). P
- 246 *Myzaphis rosarum* (Lltb.). *Rosa* sp., (B. M. Coll.). P
- 247 *Myzocallis bambusifoliae* (Takahashi). *Phyllostacus manii* (Ghosh & Raychaudhuri 1962a).
- 248\* *M. flooribundi* Verma. *Quercus floribunda*, (Verma 1965).
- 249 *M. kahawalokalani* Kirkaldy. *Lagerstroemia* sp., *Lawsonia alba*, (Anonymous 1956).
- 250 *Myzus cerasi* Fabricius. *Rubus* sp., (R. Kumar, B. M. Coll.).

- 251 **M. dycei** Carver. *Glycine max*, probably a migrant, (Ghosh & Raychaudhuri 1968a, from Sikkim). S
- 252 **M. formosana** Takahashi. *Polygonum* sp., (B. M. Coll.). N
- 253 **M. ? hemerocallis** Takahashi. *Agapanthus umbellata*, *Hemerocallis fulva* (David 1956d).
- 254 **M. ? geranicola** Shinji. *Geranium* sp., (K. D. Verma, B. M. Coll. ; According to Takahashi 1965, *M. geranicola*, Shinji 1935 is not a *Myzus*).
- 255 **M. ornatus** Laing. *Cineraria* sp., *Duranta plumieri*, (David 1956d). C
- 256 **M. (Nectarosiphon) persicae** (Sulzer) Extremely polyphagous species, [Barlow 1896, as *Rhopalosiphum dianthi*; Ghosh & Raychaudhuri 1962c, recorded male and Menon 1968 (personal communication), recorded female from Delhi]. C,P,S
- 257\* **M. (Prunomyzus) sp.** *Prunus cerasoides*, (Choudhuri *et al.* 1968).
- 258 **M. (Sciomyzus) ascolonicus** Doncaster. *Fragaria* sp., *Plectranthus coetsa*, (Choudhuri *et al.* 1968)
- 259\* **Nasonovia jammuensis** Verma, *Delphinium* sp., (Verma 1965 ; B. M. Coll. includes a species *Kakimia* n.sp. Verma, which is this species according to Dr. Verma, in personal communication).
- 260\*\***Neobetulaphis pusilla** Basu. *Betula utilis*, (Basu 1964).
- 261\*\***Neorhopalosiphonius smilacifoliae** Ghosh & Raychaudhuri. *Smilax* sp., (Ghosh & Raychaudhuri, 1968a, from Sikkim). S
- 262\* **Nippolachnus bengalensis** Basu. *Eriobotrya dubia*, (Basu & H.R.L. 1968).
- 263\* **N. erybotryae** Basu & H.R.L. *Eriobotrya petiolata*, (Basu & H.R.L. 1968).
- 264 **N. pyri** Matsumara. *Pyrus insularis* (= *khasya*), [Ghosh & Raychaudhuri 1963 (1962)].
- 265 **Obtusicaudus** sp. *Artemisia* sp., (B. M. Coll.). P
- 266\* **Oedisiphum soureni** Basu. *Anaphilis triplinervis*, (Basu 1964).
- 267 **Ovatus crataegarius** (Walker). *Mentha* sp., (Verma 1965). P
- 268 **Panaphis juglandis** (Goetze). from *Juglans regia*, (Verma 1965).

- 269\*\***Paracallipterus kalipadi** Raychaudhuri & Ghosh. *Anona squamosa*,  
(Raychaudhuri & Ghosh 1964).
- 270 **Paratrichosiphum alnicola** Basu. *Alnus nepalensis* (Basu 1967).
- 271\* **P. minutum** (v.d. Goot), Host plant unknown, (v.d. Goot 1917),  
(Raychaudhuri 1956).
- 272 **P. tattakanum** (Takahashi). *Quercus* sp. (Basu 1961b).
- 273\* **P. tattakanum assamensis** Ghosh & Raychaudhuri. *Quercus* sp.,  
(Ghosh & Raychaudhuri 1962b.).
- 274\*\***Paratrichosiphum** sp. *Solanum nigrum*, (Raychaudhuri 1956,  
reported sexual female).
- 275\*\***P. (Neoparatrichosiphum) khasyanum** Ghosh & Raychaudhuri.  
*Quercus* sp., [Ghosh & Raychaudhuri 1964 (1962)].
- 276\* **Pemphigus lichtenstani** Tullgren. *Populus* sp., *Populus nigra*,  
(Buckton 1897, as *immunis*).
- 277 **P. ? mordwilkoii** Chol. *Populus ciliata*, (B. M. Coll.). N
- 278\* **P. napaeus** Buckton. *Populus* sp., (Buckton 1897).  
*Note.*—**Pemphigus cinchonae** Buckton, from *Cinchona* sp. [Cotes  
1893 (1892), is not an aphid, but an aleyrodid, accord-  
ing to V. F. Eastop].
- 279 **Pentalonia nigronervosa** Coquerel. *Alocasia macrorrhiza*, *Caladium*  
sp., *Calocasia antiquorum*, *Elettaria cardamomum*, *Musa para-*  
*disica* and various *Musa* spp., (George 1927). C
- 280 **Periphyllus vandenboschii** H.R.L. *Acer* sp., (H.R.L. 1966 from  
Pakistan). P
- 281 **Phorodon (Diphorodon) cannabis** Passerini. *Artemisia* sp., *Cannabis*  
*indica*, *Cnicus arvensis*, *Cnicus* sp., (Das 1918). P
- 282 **Pineus laevis** (Maskell). *Pinus* spp., (Eastop 1966 mentioned its  
probable distribution in Pakistan).
- 283 **P. pini** Macquart. *Pinus excelsa*, (B. M. Coll.). N
- 284 **Plectrichophorus ? chrysanthemii** (Theobald). Host plant unknown,  
(B. M. Coll.). N
- 285 **Prociphilus micheliae** H.R.L. *Michella champaca*, (HRL 1933).
- 286 **P. oriens** Mord. Host plant unknown, (B.M. Coll.).



- 287 **P. osmanthae** Essig & Kuwana. Host plant unknown, (Ghosh & Raychaudhuri 1968b).
- 288 **Prociphilus** sp. *Tsuga brunoniana*, (Basu 1961 b).
- 289\* **Protrama penecaeca** Stroyan. *Helianthus tuberosus*, (Stroyan 1964 ; Verma & Mathur 1966, recorded male of this species).
- 290 **Pseudoessigella brachycheata** H.R.L. *Pinus wallichiana*, (H.R.L. 1966 from Pakistan). P
- 291 **Pseudoregma bambusicola** (Takahashi). *Bambusa* sp., (Puttarduria & Chennabasavanna 1952 as *Oregma*).
- 292 **P. panicola** (Takahashi). *Oplismenus compositus*, (David 1959 as *Oregma*).
- 293 **Pterochloides persicae** (Chol.). *Prunus amygdalis*, *Prunus armenica*, *Prunus bokhariensis*, *Prunus communis*, *Prunus persica*, *Prunus* spp., (Fletcher 1920 ; Das 1918, described it as *Tuberodryobius persicae* Cholod & also recorded sexual female). P
- 294 **Pterocomma pilosa** Buckton. *Salix* sp., (Verma 1965).
- 295 **P. populea** Kaltentbach. Host plant unknown, (v.d. Goot 1917).
- 296\*\***Pyrolachnus pyri** (Buckton). *Pyrus* sp., (Buckton 1899 a, as *Lachnus*).
- 297 **Reticulaphis ? shiiae** Tak. Host plant unknown, (B. M. Coll.).
- 298 **Rhodobium porosum** (Sanderson). *Rosa* spp., (Krishnamurti 1930, as *Macrosiphum rosaefolium* Theo.).
- 299 **Rhopalosiphoninus latisiphon** Davidson. sprouts of *Solanum tuberosum* (David 1954b).
- 300 **Rhopalosiphum maidis** (Fitch). Collected from many host plants, mainly of N. O. Graminae, [Lefroy 1909 ; Das 1918 recorded alate male from Pakistan ; Menon 1968, (personal communication), collected oviparous female from Delhi]. C,N,P
- 301 **R. nymphaeae** (Linnaeus). *Aponogeton moncharias*, *Eichhornia speciosa* (*crassipes*), *Lemna* sp., *Nelumbia speciosum*, *Prunus persica*, *Scripus lacustris*, *Vallisneria spiralis* also from plants of Cactaceae, & Leguminosae, (Lefroy 1909 ; Das 1918 and David 1958b, collected males of the species from Pakistan & India). P



- 302 **Rhopalosiphum padi** Linnaeus. *Avena sativa*, *Panicum crusgalli*, *Triticum vulgare*, *Zea mays*, (v.d.Goot 1917 as *Siphonaphis padi* L.) probably *Siphocoryne avcnae* (Fabr.) of Das 1918. N,P
- 303 **Rhopalosiphum rufiabdominalis** (Sasaki). Wide host range but mostly on Graminae, (Das 1918, as *Siphocoryne avenae* & *Aphis* sp., as seen in the collection of Z.S.I.). C,P
- 304\* **R. vagans** v.d. Goot. Host plant unknown, (v.d. Goot 1917, probably belongs to *Sinomegoura*, *Meguroparsus* group of genera).  
*Note.*—*Rhizobius jujubae* Buckton, recorded from *Zizyphus jujuba* by Buckton 1899b, is not an aphid, but a coccid.
- 305 **Saltusaphis scripus** Theobald. Host plant unknown, (Menon & Pawar 1958 as *S. africana* Eastop).
- 306 **Schizaphis cyperi** (v.d. Goot). *Cyperus rotundus*. (Das 1918 as *Toxoptera*). C,P
- 307 **S. graminum** (Rondani). *Avena sativa*, *Cynodon dactylon*, *Cyperus niveus*, *Cyperus rotundus*, *Eleusine coracana*, *Hordeum vulgare*, *Sorghum vulgare*, *Triticum sativum*, *Triticum vulgare*, (George 1927 as *Toxoptera graminum*). C,P
- 308 **S. minuta** v.d.G. *Cyperus rotundus*, (Eastop 1966).
- 309 **S. ?? pilepes** Oss. Host plant unknown, (B.M. Coll.). P
- 310 **S. pyricola** Mats. *Pyrus communis*, (Das 1918, as *Toxoptera punjabipyri* Das from Pakistan). P
- 311 **S. ?? pyri** Shapsnikov. *Pyrus* sp., (B. M. Coll.).
- 312 **Schoutedenia bougainvilliae** (Theobald). *Emblica officinalis*, (George 1927, as *Setaphis bougainvilliae* Theobald ; *S. emblica* Patel & Kulkarni & *S. emblica andhraka* David & Lambers 1956b, are considered synonyms of this species by Ghosh & Raychaudhuri 1962 ; David 1956b recorded sexual forms of this species.
- 313 **Schoutedina lutea** (v.d.Goot.). *Boehmeria polystachya*, (Basu 1961b). C
- 314 **Semiaphis** sp. *Lonicera angustifolia*, (Chowdhuri *et al.* 1968).
- 315 **Shinjia pteridifoliae** Shinji. *Dryopteris* sp., (Ghosh, Coll. 1962). N
- 316\*\***Shivaphis celti** Das. *Celtis australis*, *Celtis tetrandra* var. *hamiltonii*, (Das 1918 ; also described sexual forms). C,P

- 317 **Sinomegoura citricola** (v.d. Goot). *Citrus reticulata*, *Litsea polyantha*, *Photinia integrifolia*, migrant on *Bambusa* sp., (Basu 1961b, recorded it as *Ayrtchosiphon citricola*). S
- 318\* **S. pyri** Ghosh & Raychaudhuri. *Pyrus communis*, (Ghosh & Raychaudhuri 1968b).
- 319 **S. rhododendri** Takahashi. Migrant from *Smilax* sp., (Ghosh & Raychaudhuri 1968a, from Sikkim). S
- 320 **Sipha (Rungsia) maydis** Pass. From Grass, (B. M. Coll.).
- 321 **Smynthuroides betae** Westwood. Roots of Compositae, (Basu 1961b).
- 322\* **S. gossypii** Kulkarny. Roots of *Gossypium* sp., (Kulkarny 1956 as *Trifidaphis*).
- 323\* **Stomaphis mordwilkoii** H.R.L. From Walnut, (H.R.L. 1933).
- 324\*\* **Subovatomyzus leucosephtri** Basu. *Leucosceptrum canum*, (Basu 1964).
- 325\* **Sumatraphis ? celti** Tak. Trapped, (K. C. Sharma, B. M. Coll.). N
- 326\* **Tetraneura heterohirsuta** Carver & Basu. *Imperata arundinacea*, (Carver & Basu 1961).
- 327 **T. javensis** v. d. Goot. *Saccharum officinarum*, (George 1927, as *T. cynodontis coimbatorensis* George, according to David 1958c).
- 328 **T. nigriabdominalis** (Sasaki). Roots of various Graminae including *Oryza sativa*, [Fletcher 1914 as *T. ulmi* De Guer, according to David 1954a, who recorded it as *T. hirsuta* Baker, which is a synonym of *T. nigriabdominalis* (Sasaki)]. C,P,S
- 329 **T. yezoensis** Mats. From Grass roots, (B. M. Coll.).
- 330 **Therioaphis trifolii** (Monell). *Cyperus rotundus*, *Medicago lupulina*, *Medicago sativa*, (Buckton 1899b as *Chaitophorus maculatum* Buckton).
- 331 **Tiliaphis** sp. Host plant unknown, (B. M. Coll.). N
- 332 **Titanosiphon bellicosum** Nevskii. *Artemisia skoparia*, (B. M. Coll.). P
- 333 **Toxoptera aurantii** (Fonscolombe). *Acalypha* sp., *Albizia odoratissima*, *Anona squamosa*, *Artocarpus* spp., *Bougainvillea spectabilis*, *Caesalpinia cariaria*, *Camellia* spp., *Citrus* spp., *Coffea*

- arabica*, *Combretum* sp., *Dalbergia sissoo*, *Echites rubrovenosa*, *Gordinia obtusa*, *Ixora* sp., *Litchi sinensis*, *Litsea* spp., *Piper* sp., *Macleania punctata*, *Mangifera indica*, *Moringa oleifera*, *Photina japonica*, *Saccharum officinarum*, *Santalum album*, *Schima walli-chi*, *Tamarindus indicus*, *Theobroma cacao*, etc, [Cotes 1896 (1893) as *Ceylonia thaecola*, Buckton]. C,S
- 334 **T. citricidus** (Kirkaldy). *Artocarpus incisa*, *Citrus* spp., (George 1927, as *Aphis tavahsi* Del Guercio). C,N
- 335 **T. odioae** (v.d. Goot). *Anacardium occidentale*, *Achras sapota*, *Hamelia patens*, *Hibiscus rosasinensis*, *Mangifera indica*, *Odina* sp., *Panex* sp., *Vibrunum foetidum*, (George 1927 as *Aphis odinae* v. d. Goot ; *Longiunguis spathodeae* v.d.G. is probably a synonym according to Judenko & Eastop 1963).
- 336\* **Tricaudatus polygoni** Narz. s.sp. **tuberculatus** H.R.L. & Basu. *Spirea corymbosa*, (H.R.L. & Basu 1966).
- 337\* **Trichaitophorus recurvispinosus** H.R.L. & Basu. *Actinidia callosa*, (H.R.L. & Basu 1966).
- 338 **Trichosiphoniella ? momonis** Mats. *Prunus cerasoides*, (B.M. Coll.).
- 339\* **Tuberoaphis hydrangeae** Tseng & Tao, s.sp. **digitata** H.R.L. & Basu. *Hydrangea robusta*, (H.R.L. & Basu 1966).
- 340 **Tuberolachnus saligna** (Gmelin). *Salix aegyptica*, *Salix babylonica*, *Salix tetrasperma*, (Ghosh & Raychaudhuri 1962a, Das 1918, as *T. viminalis*).
- 341\* **Unipterus** n. sp. Host plant not mentioned, (David 1967).
- 342 **Vesiculaphis ? caricis** (Tull.) Trapped, (K. C. Sharma, B. M. Coll.). N
- 343 **V. grandis** Basu. *Rhododendron* sp., (Basu 1964).
- 344\* **V. pieridis** Basu. *Pieris ovalifolia*, (Basu 1964).

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